

SICOM4000

Layer 2 24+4G Port Managed Din-Rail Modular IEC61850 Switch



- Flexible modular DIN-Rail design for easy expansion
- 4 Gigabit SFP slots, 24 Fast Ethernet fiber/RJ45 optional ports or 24 RS232/RS485 serial ports
- Supports DT-Ring protocols and RSTP
- Embedded serial data server
- Patented heat dissipation technology, fanless design
- IP40 protection class



Overview

SICOM4000 is a DIN-Rail modular managed industrial Ethernet switch supporting up to 4 Gigabit SFP slots, 24 100M copper/fiber ports or 24 RS232/RS485 serial ports. It also comes with EMC industrial level 4 design and complies with IP40 protection class. Based on Kyvision3.0, CLI, WEB interface, it offers concentrated management. The state-of-the-art OPC software enables the switch's management embedded in various industrial systems.

Features & Benefits

- Redundancy Technology: supports DT-Ring protocols (recovery time < 50ms), RSTP
- Multicast Protocol: supports IGMP Snooping, GMRP and static multicast
- Network Partition: supports VLAN, PVLAN
- Service Quality: supports QoS
- Bandwidth Management: supports port trunking, port speed limit, broadcast storm control
- Network Management and Monitoring: supports CLI, Telnet, WEB management methods, Kyvision centralized management, SNMPv1/v2/v3, RMON, SNMP, LLDP
- Network Security: supports SSH, SSL, ACL
- Device Management: supports FTP upgrade
- Device Maintenance: supports port mirroring
- Alarm Output: supports IP/MAC conflicts, power, port and ring alarms
- Special Function: supports Link Check and Loop Status Check

Technical Specifications

Standard

IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3x, IEEE802.1p, IEEE802.1Q, IEEE802.1w

Protocols

DT-Ring, DT-Ring+, DT-VLAN, RSTP;
IGMP Snooping, GMRP;
VLAN, PVLAN;
Telnet, HTTP, SNMPv1/v2/v3, RMON, LLDP, SNMP;
SSH, SSL, ACL;
ARP, FTP, QoS

Switch Properties

Priority Queues: 4
Number of VLANs: 256
VLAN ID: 1-4094
Number of Multicast Groups: 256
MAC Table: 8K
Packet Buffer: 4Mbit
Packet Forwarding Rate: 9.5Mpps
Switching Delay: < 5μs

Interface

1 slot for CPU module
1 slot for switching module
1 slot for power module
1 slot for 4-port Gigabit interface module
6 slots for 4-port Fast Ethernet interface modules or 4-port serial interface modules
Gigabit Ethernet Ports: 4 1000Base SFP slots
Fast Ethernet Ports: max 24 100Base-FX, SM/MM ports, FC/SC/ST connector or 24 10/100Base-TX RJ45 ports
Serial Port: max 24 RS232/RS485 ports
Console Port: RS232 (RJ45 connector)
Alarm Contact: 2-pin 3.81mm-spacing plug-in terminal block, 250VAC/350VDC Max, 120mA Max

LED

LEDs on Front Panel:
-Running LED: Run
-Alarm LED: Alarm
-Power LED: PWR1, PWR2
-Interface LED: Link/ACT, Speed (RJ45 port)
LEDs on Rear Panel:
-Interface LED: Link/ACT
-Port Speed LED: Speed

Transmission Distance

Serial Cable: RS232, 15m; RS422/RS485, 1200m
Twisted Pair: 100m (Standard CAT5, CAT5e network cable)
Multi Mode Fiber: 1310nm, 5km (100M)
850nm, 550m (1000M)
Single Mode Fiber: 1310nm, 40km/60km (100M)
1550nm, 60km/80km (100M)
1310nm, 10km/40km (1000M)
1550nm, 60km/80km (1000M)

Power Requirements

Power Input: 24VDC (18-36VDC), 48VDC (36-72VDC)
Power Terminal: 3-pin 3.81mm-spacing plug-in terminal block
Power Consumption: <24W (full Ethernet ports)
<36W (full serial ports)
Overload Protection: Support
Reverse Connection Protection: Support
Redundancy Protection: Support

Physical Characteristics

Housing: Aluminum, fanless
Protection Class: IP40
Dimensions (W×H×D): 416×170×158 mm (16.38×6.69×6.22 in.)
Weight: 8kg (17.637 pound)
Mounting: DIN-Rail or panel mounting

Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

MTBF

282,000 hrs

Warranty

5 years

Approvals

CE, FCC

Industrial Standard

EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:

IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

Machinery:

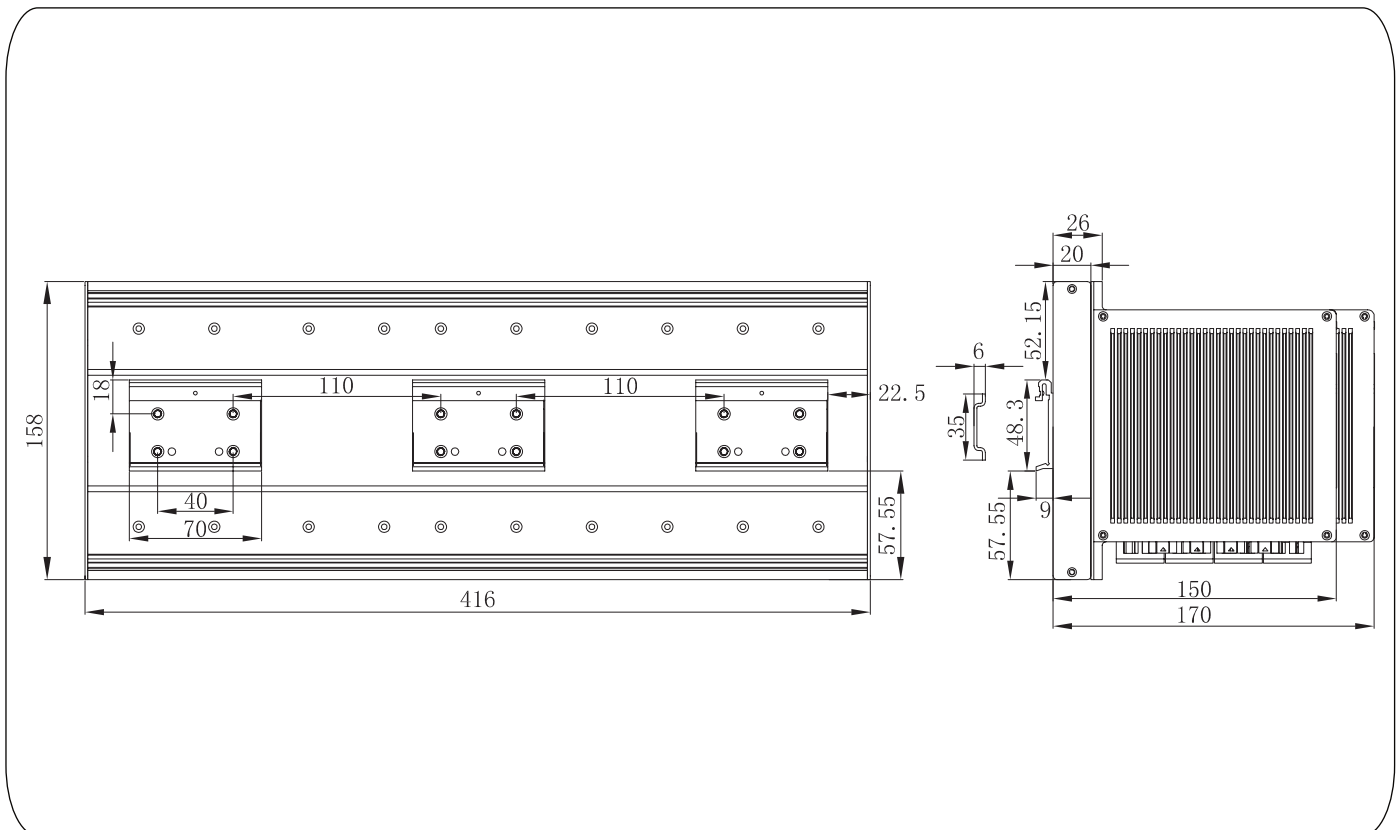
IEC60068-2-6 (Vibration)
IEC60068-2-27 (Shock)
IEC60068-2-32 (Free Fall)

Industry: IEC61000-6-2

Railway: EN50155, EN50121-4

Traffic Control: NEMA TS-2

Mechanical Drawing



Ordering Information

Model	Slot				
	Slot for Gigabit Ethernet Interface Module	Slot for Power Module	Slot for Switching Module	Slot for CPU Module	Slot for Fast Ethernet or Serial Interface Module
SICOM4000-Chassis	1	1	1	1	6

Interface Module	Gigabit Ethernet Port	Fast Ethernet Port			Serial Port	Fiber Connector			Remark
	1000Base SFP	100BaseFX Single Mode	100Base-FX Multi Mode	10/100Base-TX		SC	ST	FC	
SM4.1-Power-24	--	--	--	--	--	--	--	--	24VDC power module
SM4.1-Power-48	--	--	--	--	--	--	--	--	48VDC power module
SM4.1-4GX	4	--	--	--	--	--	--	--	--
SM4.1-4S	--	4	--	--	--	Please Select			--
SM4.1-4M	--	--	4	--	--				--
SM4.1-2S-2T	--	2	--	2	--				--
SM4.1-2M-2T	--	--	2	2	--				--
SM4.1-4T	--	--	--	4	--	--	--	--	--
SM4.1-4D-232/485	--	--	--	--	4 (RS232/RS485)	--	--	--	--

Accessories

Model	Description
Gigabit SFP module	Refer to Kyland industrial Gigabit SFP list
DT-FCZ-RJ45-01	RJ45 dustproof shield

Order Codes

SICOM4000 - - - - - - - - -

G S1 S2 S3 S4 S5 S6 PS

G: Gigabit Ports

4G= SM4.1-4GX, Interface module with 4 Gigabit SFP ports.
None=No Gigabit port

S1 to S6: Slots for Fast Ethernet or serial interface modules

4SSC= SM4.1-4S, Interface module with 4 100Base fiber ports, single mode, 1310nm, 40km, SC connector

4SST= SM4.1-4S, Interface module with 4 100Base fiber ports, single mode, 1310nm, 40km, ST connector

4SFC= SM4.1-4S, Interface module with 4 100Base fiber ports, single mode, 1310nm, 40km, FC connector

4MSC= SM4.1-4M, Interface module with 4 100Base fiber ports, multi mode, 1310nm, 5km, SC connector

4MST= SM4.1-4M, Interface module with 4 100Base fiber ports, multi mode, 1310nm, 5km, ST connector

4MFC= SM4.1-4M, Interface module with 4 100Base fiber ports, multi mode, 1310nm, 5km, FC connector

2SSC2T= SM4.1-2S-2T, Interface module with 2 100Base fiber ports, single mode, 1310nm, 40km, SC connector; 2 10/100Base-TX RJ45 ports

2SST2T= SM4.1-2S-2T, Interface module with 2 100Base fiber ports, single mode, 1310nm, 40km, ST connector; 2 10/100Base-TX RJ45 ports

2SFC2T= SM4.1-2S-2T, Interface module with 2 100Base fiber ports, single mode, 1310nm, 40km, FC connector; 2 10/100Base-TX RJ45 ports

2MSC2T= SM4.1-2M-2T, Interface module with 2 100Base fiber ports, multi mode, 1310nm, 5km, SC connector; 2 10/100Base-TX RJ45 ports

2MST2T= SM4.1-2M-2T, Interface module with 2 100Base fiber ports, multi mode, 1310nm, 5km, ST connector; 2 10/100Base-TX RJ45 ports

2MFC2T= SM4.1-2M-2T, Interface module with 2 100Base fiber ports, multi mode, 1310nm, 5km, FC connector; 2 10/100Base-TX RJ45 ports

4T= SM4.1-4T, Interface module with 4 x 10/100Base-T(X) ports, RJ45 connector

4D= SM4.1-4D-232/485, Interface module with 4 x RS232/RS485 serial ports

XX=None

(Note: Please contact sales if you need 60km, 80km single mode fiber ports or single bi-direction fiber ports. Interface module also supports other fiber and copper combinations, but will need longer lead time, not recommended.)

PS: Power Supply

24= SM4.1-Power-24, Power supply module of 24VDC (18-36VDC), dual redundant power inputs

48= SM4.1-Power-48, Power supply module of 48VDC (36-72VDC), dual redundant power inputs

Example Order Codes

SICOM4000-4G-4MSC-4MSC-4MSC-4MSC-XX-XX-24

SICOM4001 chassis, with 1x SM6.1-4GX supports 4 Gigabit SFP ports, 4 x SM4.1-4M supports 16 100Base-FX multi mode 1310nm 5km fiber ports, 1 x SM4.1-Power-24 supports 24VDC dual power inputs.